



HOW TO...

Create a timesheet

If you're self-employed, reliable records of work are a must. Nathan Barrow explains how to create a spreadsheet that calculates working hours and earnings

EXPERT TIP

To hide hourly rates from view, perhaps for a printout to send to a client, you can cut and paste them on another sheet. Excel will update the links to the data automatically.

Millions of people in the UK are self-employed and they all need to keep records of the hours they have worked. If you do this on a spreadsheet, you can also automatically calculate your earnings.

Every profession has its own ways of working. To provide an example here, we have made the following assumptions: overtime is paid when more than eight hours are worked and Sundays are charged at a special rate. Minutes are rounded up or down to the nearest quarter hour, and lunch and other breaks are not charged to the client.

1 Open a new worksheet and highlight columns A to I by clicking and dragging across the grey border along the top of the sheet. Right-click, select Column Width and enter 11 into the box that appears. Type Timesheet into cell A1 and Earnings in G1, and format the text to your liking. In A2 enter For week beginning; and for this example enter 9/10/2005 in C2. In cells A3 to I3 enter consecutively Date, Clock on, Clock off, Break, Worked Hrs, Overtime Hrs, Normal, Overtime, Total. Highlight these cells and click the Centre tool followed by the default Borders tool to underline them. Finally, type Normal rate, Overtime rate and Sunday rate into cells A13 to A15 and put your hourly rates into B13 to B15.

2 Enter =C2 into cell A4 to set it to the same value. Next, enter =A4+1 into A5 to add one to the date that appears in A4. Select A5 again, click the little square in the lower right of the cell and drag it down to A10. Highlight the range A4 to A10, then right-click and select Format Cells. Click the Number tab, select Custom

from the bottom of the list and in the Type box enter ddd mmm d. Click OK and the days of the week appear.

3 Enter Clock on and Clock off times into cells B4 to C10, using 24-hour clock times and a colon to separate hours and minutes. This tells Excel that you're entering a time. Highlight these cells, right-click and open the Format Cells dialog box again. Choose the Custom format and enter h:mm AM/PM.

The length of breaks taken each day is a measurement of time rather than a specific time, so it needs to be formatted differently. Select D4 to D10 and open the Format Cells box again. On the Number tab, choose Custom and enter h:mm. You can then enter break lengths for each day, using a colon to separate hours and minutes.

4 Spreadsheet software stores times and dates as a simple number, with each integer referring to a particular day. Therefore, time is recorded as a fraction of a day; noon is 0.5 and 9am is 0.375. No matter how time is formatted, calculations are easy.

To calculate the normal hours worked on Sunday, you could enter =(C4-B4-D4)*24 into E4. Multiplying by 24 converts fractions of days into hours. However, we want to round everything to the nearest quarter hour. The MROUND function will do this. Click the Tools menu, select Add-Ins and tick the box marked Analysis ToolPak. If it's not listed, load it from your Office disc. Go to Start, Control Panel, Add or Remove Programs, find Microsoft Office and click Change. You can then follow the wizard for adding and removing features.

In Excel, enter =MROUND(((C4-B4-D4)*24), 0.25) into E4 to round to the nearest quarter of an hour. The last value in the formula sets the rounding value. Select E4 again and drag the corner box to extend the formula down to E10. To make the hours worked look neater, select E4 to E10, open the Format Cells dialog box and its Number tab and choose Fraction, Up to one digit (1/4).

5 As any time over eight hours is paid as overtime, we must use the IF function in F4. Enter the formula =IF(E4>8,(E4-8),0) and drag this down to F10. Format these cells so they are like those in column E. A quick way to do this is to select E4, click on the Format Painter tool (a paintbrush icon) and click and drag from F4 to F10.

6 Now we can calculate the earnings. In cell G4 enter =E4*B15, the Sunday hours worked at the Sunday hourly rate. In G5 enter =(E5-F5)*\$B\$13, the Monday hours worked, less any overtime, at the Normal rate. The \$ signs fix the cell reference B13 so it won't change to B14 and so on when we copy this formula down to cell G10; do this now. In H5, enter =F5*\$B\$14 and drag it down to H10. In cell I4, enter =G4+H4 and drag this down to I10.

To summarise the week, underline E10:I10 with the Border tool, enter =SUM(E4:E10) in E11, and drag this formula across to Cell I11. Select cells G4 to I10, open the Format Cells box, click the Number tab and select Accounting with 2 decimals. Next, select G11 to I11 and format these as Accounting with 2 decimals and include the £ symbol from the drop-down list. Finally, highlight the cells that will receive weekly entries with the Fill Colour tool.

